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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,216	09/24/2003	Yasuhiro Yoneda	1422-0603P	1568
2292 7590 07/10/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER MARCHESCHI, MICHAEL A	
			ART UNIT 1755	PAPER NUMBER
			NOTIFICATION DATE 07/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/668,216

Applicant(s)

YONEDA ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 4/30/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/30/07 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being obvious over EP 1 020 501 in view of Liu et al. and/or Ina et al. and further in view of Taira et al. (216).

The EP reference teaches in sections [0047]-[0057], a polishing slurry for a semiconductor or other substrates (silicon, silicon dioxide or a Ni-P plated aluminum alloy substrate (see section [0077], [0091] and [0094]), comprising a combination of inorganic particles (silica, etc.) and polymer particles (thermoplastic resin). The polymer particles and inorganic particles have a size of at least 0.01 μm and the inorganic particles are smaller than the polymer particles. The ratio of the mean particle size of the polymer particles to the mean particle size of the inorganic particles is 0.01-0.95. The content of both particles is also defined.

Liu et al. teach in column 6, lines 62+ beneficial reasons to use colloidal abrasives.

Ina et al. teach in column 8, lines 54+ beneficial reasons to use colloidal abrasives.

Taira et al. (216) teaches in column 11, lines 1-18, that polishing composition are known to have a pH of 2-12 (for any substrate) and said pH is dependent on the substrate to be polished.

It is further stated that when semiconductors are polished, the pH of a polishing composition is known to be preferably 7-12.

The primary reference teaches a polishing slurry (bi-modal) which reads on the instant claims in view of the teaching of the individual particle sizes and the ratio of the mean particle size of the polymer particles to the mean particle size of the inorganic particles. The size ranges disclosed by the primary reference encompasses values which meet the claimed formula. In view of this, the claimed formula and therefore subject matter of claims 1, 2, 4, and 7-10 would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549; *In re Wertheim* 191 USPQ 90 (CCPA 1976). With respect to the colloidal silica limitation, the use of colloidal silica would have been obvious because both Liu et al. and Ina et al. teach beneficial reasons to use this material, thus one skilled in the art would have found it obvious to use this silica form in view of the beneficial reasons defined by these references. With respect to the limitation of claim 3, it is the examiners position that the polymers defined by this reference will have the claimed glass transition temperature absent evidence to the contrary. With respect to the limitations of claim 5, since the particles are independent of one another, they must have the same zeta potential sign. With respect to the limitation of claim 6, the reference defines amounts for the inorganic and organic particles and although a ratio is not specifically defined, the claimed ratio is broadly encompassed by the reference defining a mixture. Finally, with respect to the pH, the primary reference states that the composition is used to polish semiconductor substrate and since it is known that the pH of the

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composition is dependent on the substrate to be polished (see page 18, lines 12+ of the instant specification and the teachings in Taira et al. in column 11, lines 1-4), one skilled in the art would have appreciated and thus found the claimed pH obvious in the composition according to EP 1 020 501 because polishing compositions for semiconductors are known to have this pH, as shown by Taira et al. With respect to the pH of the composition for polishing aluminum alloy substrate plated with Ni-P, Taira et al. defines that the pH of a polishing composition for this can be 2-12, thus one skilled in the art would have appreciated and thus found the claimed pH obvious in the composition according to EP 1 020 501 because polishing compositions for this material are known to have this pH, as shown by Taira et al. The EP reference does not define a pH, thus the skilled artisan would appreciate that the composition can be made to have any known pH value for the applications sought.

Applicant's arguments with respect to all the claims have been considered but are moot in view of the new ground(s) of rejection.

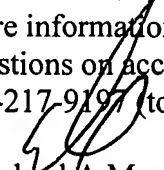
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/07
MM



Michael A Marcheschi
Primary Examiner
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